IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Robert A. Abraham et al.

Serial No.:

10/820,691

Examiner: GOODLEY, JAMES E.

Filing Date:

Title:

Sir:

April 8, 2004

CIRCUIT FOR GENERATING SPREAD SPECTRUM CLOCK

Group Art Unit: 2817

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COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria VA 22313-1450

MAR 1 6 2006

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Tra	ansmitted he	rewith is/are the follo	wing in the	above-identified	applic	atio	n:						
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No additional fee (Address envelope to "Mail Stop Amendments")													
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		Respectfully submitted,											
	Robert A. Abi								nam et	al.			
tran	ereby certify that ismitted to the F date shown bel		Eric Ho Attorney/Agent for Applicant(s)										
Date of facsimile: March 15, 2006						Reg. No. 39,711							
Typed Name: Eric Ho								-,,					

Date:

March 15, 2006

Telephone No. 818-998-7220

Rev 10/04 (TransAmd)

Signature;

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PAGE 02

Attorney Docket: 10031136-1

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10/820.691 Robert A. Abraham et al. Appl No

Applicant. April 8, 2004 Filed

2817 TC/A.U.

03/16/2006 08:58

GOODLEY, JAMES E. Examiner

10031136-1 Docket No.

8538 Confirm. No. :

MAIL STOP: NON-FEE AMENDMENTS COMMISSIONER FOR PATENTS ALEXANDRIA, VA 22313-1450

AMENDMENT AND RESPONSE TO OFFICE ACTION DATED DECEMBER 16, 2005

In response to the Office Action dated December 16, 2005, please consider the following remarks and amend the above-identified application as follows:

Amendment to the Claims/Listing of the Claims begin on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

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Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application.

Listing of the Claims:

- (currently amended) A circuit for generating a spread spectrum clock comprising:
 - a voltage controller oscillator (VCO) that includes an input coupled to a voltage control node (V_ctrl) for receiving a voltage signal and an output for generating a clock signal that has a frequency (F_out) dependent on the received voltage signal; and
 - a VCO input voltage modulation mechanism, coupled to the VCO input voltage node, for modulating the voltage at the VCO input voltage node to generate a spread spectrum clock: wherein the VCO input voltage modulation mechanism uses a plurality of pull-up transistors and a plurality of pulldown transistors to selectively adjust the voltage at the VCO input voltage node; and wherein the VCO input voltage modulation mechanism uses a plurality of delay cells to selectively adjust the time between a first point and a second point on a graph of the voltage at the VCO input voltage node with respect to time.
 - (original) The circuit of claim I wherein the VCO input voltage modulation mechanism further includes

a voltage shift-up mechanism for pulling up the voltage at the VCO input voltage node by injecting a level shifting current into the VCO input voltage node.